

SR 99: ALASKAN WAY VIADUCT & SEAWALL REPLACEMENT PROGRAM

Parks and Recreation Technical Memorandum S. Holgate Street to S. King Street Viaduct Replacement Project Environmental Assessment

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ACRONYMS

City	City of Seattle
FHWA	Federal Highway Administration
I-5	Interstate 5
I-90	Interstate 90
Project	SR 99: S. Holgate Street to S. King Street Viaduct Replacement Project
SDOT	Seattle Department of Transportation
SIG	Seattle International Gateway
SR	State Route
viaduct	Alaskan Way Viaduct

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Chapter 1 SUMMARY

This technical memorandum analyzes effects on parks, recreation facilities, and public art within or near the project area for the SR 99: S. Holgate Street to S. King Street Viaduct Replacement Project (the Project). The project area extends along the State Route (SR) 99 mainline from S. Walker Street on the south to S. King Street on the north. The study area for this analysis includes parks and recreation facilities within three to five blocks of the project area.

Recreational facilities include those on private land in which the public has a proprietary interest, such as an access easement or other access rights. An additional analysis of facilities subject to federal Section 4(f) regulations relating to historic and park and recreational resources is included in the Project's Environmental Assessment and Draft Section 4(f) Evaluation. No park or recreation facilities have been identified in the study area that are subject to federal Section 6(f) regulations relating to facilities that have received funding from the Land and Water Conservation Fund.

1.1 Major Features of the Project

Major features of the Project include:

- A single-level elevated structure to carry SR 99 on a side-by-side configuration from S. Holgate Street to just north of S. Royal Brougham Way.
- An at-grade section extending about 300 feet north of the single-level elevated structure.
- A ramp connecting the at-grade section to the existing double-level Alaskan Way Viaduct structure.
- At-grade crossings under the SR 99 elevated structure for S. Atlantic Street. S. Royal Brougham Way would no longer cross SR 99 to the west.
- Relocation of the switching (or tail) track serving the Seattle International Gateway (SIG) and Whatcom Railyards. The portion of the tail track north of S. Atlantic Street would be relocated to the west side of Alaskan Way S.
- A below-grade two-lane roadway (U-shaped undercrossing) north of S. Atlantic Street would loop underneath SR 99 and underneath the tail track to allow traffic to cross the tail track when trains are present.

- Widening S. Colorado Street from S. Massachusetts Street to S. Atlantic Street to allow enhanced access for truck traffic from the SIG Railyard to S. Atlantic Street and the U-shaped undercrossing beneath SR 99.
- Reconfiguring Alaskan Way S. to consist of separate northbound and southbound lanes on either side of the SR 99 roadway south of Railroad Way S.
- Providing a new northbound off-ramp and southbound on-ramp to and from Alaskan Way S. south of S. King Street.
- Providing an off-street multi-purpose trail on the west side of the tail track as well as on the east side of the roadway. The trail on the west side would be buffered from Terminal 46 to the west by a landscape area with trees. The trail on the east side would be buffered from the roadway and remote holding area for Seattle Ferry Terminal traffic by a landscape area with trees on both sides. A bicycle lane would be provided on the northbound and southbound surface streets.

1.2 Effects

The effects on parks and recreation facilities associated with the Project would be minor. No park or recreation facility would be permanently displaced by the Project or displaced during construction.

The Waterfront Bicycle/Pedestrian Facility would be relocated by the Project from the east side of the surface street to the west side of the surface street. The width of the replacement facility would be similar. The usability and experience for users would be similar.

The planned Mountains to Sound Trail would be reconfigured by the Project. It would maintain a similar width, would continue to connect to the Waterfront Bicycle/Pedestrian Facility, and would provide a similar experience to users.

These two facilities are considered by the City to be primarily transportation facilities; however, they have a recreational component recognized by their inclusion in the Seattle Urban Trails System, which is designated to provide “a network of on- and off-street trails that facilitate walking and bicycling as viable transportation choices, provide recreational opportunities, and link major parks and open spaces with Seattle neighborhoods.” They are also included in *Seattle’s Parks and Recreation 2006 Development Plan* (Seattle 2006a), which includes in the park and recreation system facilities such as boulevards and trails (Seattle 2006a).

Chapter 2 METHODOLOGY

Effects on park and recreation facilities and resources were identified by assessing the Project for potential effects on the displacement or change in use characteristics of park, recreation, public access, and public art facilities and installations. Existing and planned resources and use patterns were assessed and compared with the likely character of the facility under construction and operation of the Project.

Existing conditions were assessed based on one or more of the following parameters:

- The characteristics of the facility that relate to current or potential use.
- The typical use by different population groups using the facility.
- Surrounding environmental conditions that contribute to use and enjoyment of facilities, including amenities such as views and intrusions such as noise effects or traffic hazards.
- Connections or other interrelations between facilities.
- Current plans for proposed expansion or improvements to the facility, or plans for new facilities on land currently undeveloped but designated for park or recreation use.

Seattle's Parks and Recreation 2006 Development Plan (Seattle 2006a) was used to identify the City's plans and policies for the recreation facilities in the study area. City of Seattle neighborhood plans also contain policies relating to parks and recreation facilities and specific work program items to implement recommendations of the plans. Specific designated neighborhoods along the project corridor (from south to north) include:

- Duwamish Manufacturing and Industrial Center.
- Pioneer Square.

Public shoreline access is regarded with the same degree of importance as open space and will be planned to ensure a reasonable amount of public access along each shoreline. Shoreline public access includes both publicly owned land and areas dedicated by Shoreline Management permit condition.

Effects of the Project were assessed based on one or more of the following parameters:

- Total or partial acquisition of property for right-of-way or related facilities that would displace some or all facilities or functions.

- Partial acquisition that would change the relationship between facilities.
- Project features that would permanently alter access.
- Project features that would change parking supply off-site, which would affect access and use of the facility.
- Project features that would interrupt connections between facilities.
- Relocation of trails or provision of alternate facilities that would change amenities and interest.
- Changes in views from park and recreation facilities that would change amenities and interest.
- Introduction of proximity effects, such as noise or additional traffic, that would degrade the recreational experience.

Construction effects generally include the same parameters as above for permanent facilities, but are evaluated for the degree and duration of the effect during construction.

Indirect and cumulative effects include opportunities afforded by the Project to provide park or recreation facilities, such as trails or viewpoints, or to provide supporting facilities such as parking. The Project could also create changes in context that encourage or discourage development of public or private recreational facilities. Indirect effects could include changes in land use context that would change use patterns and thereby change the demand for recreational facilities.

Potential mitigation measures to be considered include measures that could:

- Avoid effects through changes in alignment or other features of the Project to avoid or reduce displacements.
- Reduce proximity effects, such as noise or visual effects, with changes to the design or materials, barriers, buffers, refuge areas, and other features.
- Compensate for displaced facilities and functions by providing new or augmented facilities at a different location.

2.1 Studies and Coordination

Park and recreation facilities in the project area were identified with the cooperation of the City of Seattle Parks Department, the Port of Seattle, and the Seattle Department of Planning and Development. Seattle's public access

requirements for private development on the shoreline and other areas were also used in identifying facilities.

The project team used the following plans and guidelines to evaluate potential effects:

- City of Seattle, Comprehensive Plan, 2005
- City of Seattle, *Duwamish Manufacturing and Industrial Center Neighborhood Plan*, June 2000
- City of Seattle, *Pioneer Square Neighborhood Plan*, November 1998
- City of Seattle, Shoreline Master Program and supporting studies
- *Seattle's Parks and Recreation 2006 Development Plan* (Seattle 2006a)
- City of Seattle, Pro-Parks Levy 2000 and Status Report, 2007
- City of Seattle, Pedestrian/Bicycle Plans and routes, 2007
- Port of Seattle Public Access Plan
- City of Seattle 1987 Harborfront Public Improvement Plan
- City of Seattle 1992 Central Waterfront Design Guidelines
- City of Seattle, Shoreline Master Program, Shoreline Substantial Development Permit records for private and public projects within the shoreline
- Washington Recreation and Conservation Office Guidelines
- Department of Natural Resources policies for public use of aquatic lands
- Federal Highway Administration (FHWA) policies, Section 4(f) 23 CFR 771

Information gathered included:

- Base maps from the project's Geographic Information System (GIS) that illustrate park locations, site topography, street pattern, shoreline, and specific land uses.
- Park, trail, and recreation facility location maps from the City of Seattle, Port of Seattle, King County Department of Natural Resources and Parks, and other agencies.
- Park and trail development plans from the City of Seattle, Port of Seattle, King County Department of Natural Resources and Parks, and other agencies.
- Public art installations near the project corridor.

- Permit conditions from City Shoreline Substantial Development Permit records for public access requirements for private and public projects within the shoreline.
- Design features of the Project, including horizontal and vertical alignment, structure elevations, and other facilities.

Collected information was confirmed by site reconnaissance and meetings with local jurisdictions (largely conducted between 2002 and 2007 as part of the Draft and Supplemental Draft Environmental Impact Statement preparation for the Alaskan Way Viaduct and Seawall Replacement Project), including:

- City of Seattle, Department of Parks and Recreation
- City of Seattle, Department of Transportation
- City of Seattle, Department of Planning and Development
- Seattle Office of Arts and Cultural Affairs
- Port of Seattle
- Washington State Ferries

As a result of consultation with these agencies, park and recreation facilities within three to five blocks of the proposed project facilities were identified for further analysis as potentially affected by the Project. The three- to five-block distance was chosen to capture both operational and construction effects, including proximity effects, such as noise.

No King County parks or recreation facilities were identified within this study area.

Chapter 3 AFFECTED ENVIRONMENT

Recreation facilities discussed in this chapter reflect facility and planning perspectives contained in *Seattle's Parks and Recreation 2006 Development Plan* (Seattle 2006a). The park and recreation system is described in the plan as consisting of open space; parks; boulevards and trails; beaches; lakes and creeks; recreational, cultural, environmental, and educational facilities; a broad variety of programs; and people (Seattle 2006a).

Parks and sites with designated public access within the study area are listed in Exhibit 3-1, and their locations are shown in Exhibit 3-2. Sites are owned primarily by the Seattle Parks Department, the Port of Seattle, and special purpose agencies, including shoreline access facilities required by conditions of Shoreline Management Substantial Development Permits and other City permits and approvals.

Public art installations in the project vicinity are listed in Exhibit 3-3 and discussed in Section 3.2 and in the analysis of effects in Chapter 4.

3.1 Parks, Recreation, and Public Access Facilities

The City has evaluated existing facilities in Seattle with regard to adopted park and recreation space standards. The northerly portion of the project area is within the Pioneer Square Urban Center Village. The standard for "Village Open Space" of 10,000 square feet within 1/8 mile (660 feet) of all village locations is met by open space provided by Pioneer Square Park, Occidental Square, and City Hall Park. The southerly portion of the Urban Village does not have facilities close enough to meet the standard. The standard for the "Village Commons Goal" of at least one usable open space a minimum of 1 acre in size does not currently apply to the Pioneer Square area because existing and target households are fewer than 2,500 (Seattle 2006b).

The study area south of the boundary of the Pioneer Square Historic District is in the City of Seattle Neighborhood Plan for the Greater Duwamish Manufacturing and Industrial Center, which contains no policies for parks or recreation. Generally, recreational demand and opportunities are limited in industrial areas by the nature of the area as an employment center for manufacturing, distribution, warehousing, and transportation facilities, including railyards. In this case, however, the area contains the baseball and football stadiums and related uses.

Exhibit 3-1. List of Parks, Trails, and Recreation and Public Access Facilities

Facility Name	Location	Owner	Primary Facilities	Primary Uses
1. Jack Perry Memorial Viewpoint	Alaskan Way S./E. Marginal Way S. just south of S. Massachusetts Street	Port of Seattle	Hard Surfaces Soft Surfaces Seating Picnic Tables/Shelters Restrooms Parking	Waterfront View Enjoyment
2. East Marginal Way Bicycle/Pedestrian Facility	E. Marginal Way S. from S. Royal Brougham Way to S. Spokane Street	City of Seattle	Trail	View Enjoyment Walking Jogging Bicycling Skating
3. Mountains to Sound Greenway Trail (planned)	S. Atlantic Street at Alaskan Way S.	City of Seattle	Trail	View Enjoyment Walking Jogging Bicycling Skating
4. Waterfront Bicycle/Pedestrian Facility	Alaskan Way from S. Royal Brougham Way to Bay Street	City of Seattle	Trail	View Enjoyment Walking Jogging Bicycling Skating
5. Safeco Field	First Avenue S. and S. Atlantic Street	Washington-King County Stadium Authority	Professional Sport Facility Parking	Professional Baseball
6. Qwest Field	Occidental Avenue S. and S. King Street	Washington State Public Stadium Authority	Professional Sport Facility Conference Facility Parking	Professional Football and Soccer

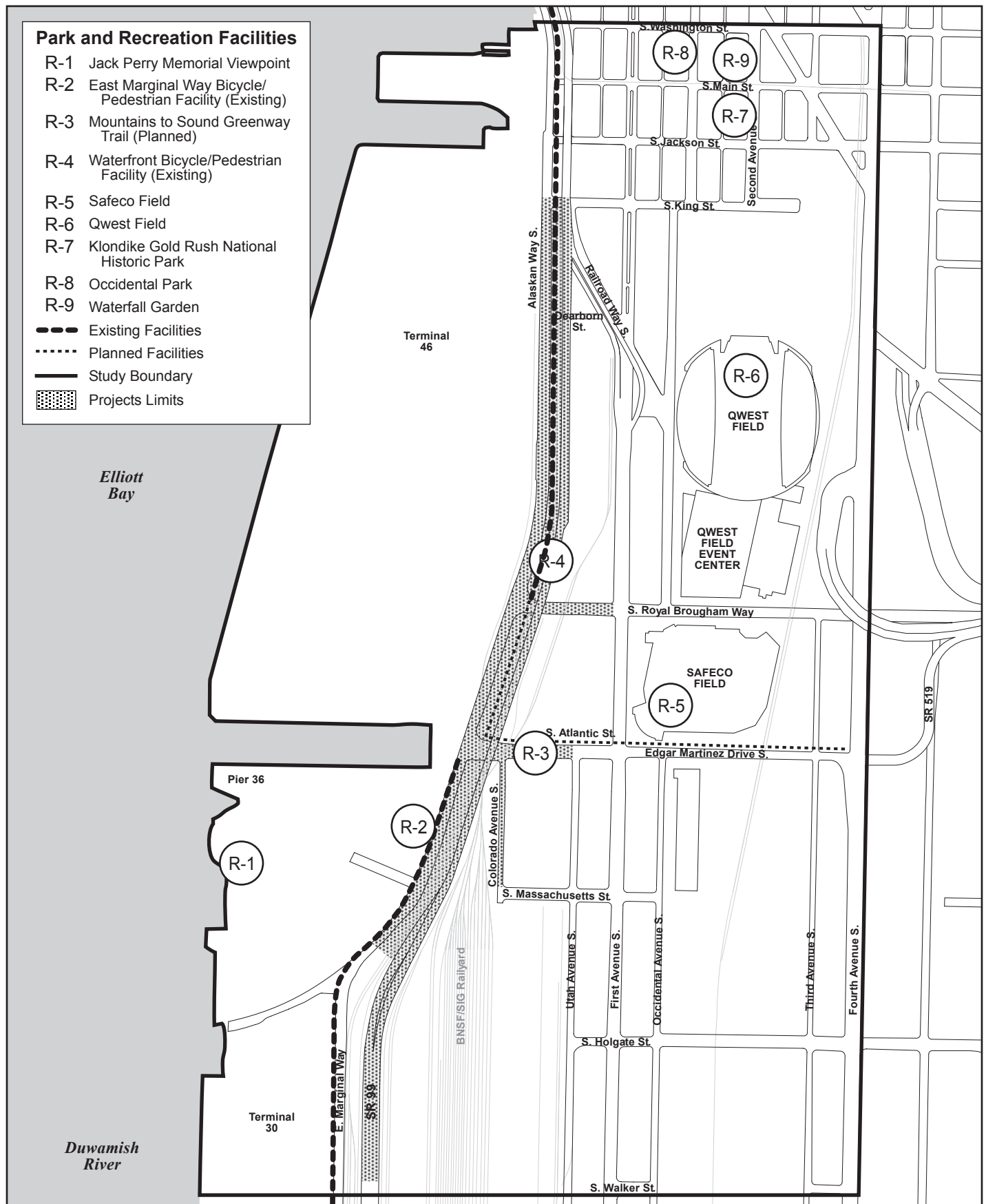
Exhibit 3-1. List of Parks, Trails, and Recreation and Public Access Facilities (continued)

Facility Name	Location	Owner	Primary Facilities	Primary Uses
7. Klondike Gold Rush National Historic Park – Seattle Unit	319 Second Avenue S.	National Park Service	Historic Exhibits	Historic Interpretation
8. Occidental Park	Occidental Avenue S. between S. Washington and S. Main Streets	City of Seattle	Hard Surfaces Seating Picnic Tables/Shelters	Relaxation Picnicking People Watching
9. Waterfall Garden (Private)	S. Main Street at Second Avenue S.	Annie E. Casey Foundation	Hard Surfaces Seating Tables Water Feature	Relaxation Picnicking People Watching

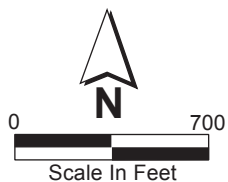
Park and Recreation Facilities

- R-1 Jack Perry Memorial Viewpoint
- R-2 East Marginal Way Bicycle/
Pedestrian Facility (Existing)
- R-3 Mountains to Sound Greenway
Trail (Planned)
- R-4 Waterfront Bicycle/Pedestrian
Facility (Existing)
- R-5 Safeco Field
- R-6 Qwest Field
- R-7 Klondike Gold Rush National
Historic Park
- R-8 Occidental Park
- R-9 Waterfall Garden

- Existing Facilities
- Planned Facilities
- Study Boundary
- ▨ Projects Limits



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**Exhibit 3-2
Park, Recreation, and
Public Access Facilities**

Exhibit 3-3. Public Art Installations

Title	Artist	Owner
Safeco Field Art Installations	Various	Washington-King County Stadium Authority
Qwest Field and Event Center Art Installations	Various	Washington State Public Stadium Authority
Occidental Park totem poles Fallen Firefighters' Memorial	Duane Pasco Hai Ying Wu	City of Seattle
Waterfall Garden waterfall with stonework	Masao Kinoshita	Annie E. Casey Foundation

Jack Perry Memorial Viewpoint: The only shoreline access in the project area is provided at the Jack Perry Memorial Viewpoint on Port of Seattle property south of Pier 36. This site is accessed by a driveway off E. Marginal Way S., just south of S. Massachusetts Street, and provides views of the Duwamish East Waterway and Port facilities. The site has views to the east of the SR 99 transition from an at-grade roadway to the viaduct structure. This view is a minor component of views from the site compared to waterfront views.

Mountains to Sound Greenway Trail: This planned trail is designated as part of the Seattle Urban Trails System in the City's Comprehensive Plan (Seattle 2005). The Urban Trails System is designated to provide "a network of on- and off-street trails that facilitate walking and bicycling as viable transportation choices, provide recreational opportunities, and link major parks and open spaces with Seattle neighborhoods..." The City considers this facility to be primarily a transportation rather than a recreational facility. This trail is designated by the City as part of the Mountains to Sound Greenway, a scenic, historic, and recreation corridor along Interstate 90 (I-90) from near Ellensburg to Seattle (Mountains to Sound Greenway 2007). The proposed trail connection from I-90 to the waterfront is included in \$2.08 million funding in the City of Seattle Pro Parks Levy (Seattle 2000b). The portion of the trail that runs along S. Atlantic Street/Edgar Martinez Drive S. between Fourth Avenue S. and Alaskan Way S. uses the sidewalk on the north side of the street with a short asphalt section under the Alaskan Way Viaduct. It is planned to connect to an extension of the Waterfront Bicycle/Pedestrian Facility on the west side of the existing viaduct that currently terminates at S. Royal Brougham Way (Anderson 2003 personal communication).

BNSF railroad operations will also affect use of the trail when railroad cars block movement across the tail track, which currently occurs. The tail track is

used to assemble trains from the SIG Railyard and will receive additional use due to expansion of the railyard (a separate project). The frequency and duration of blockage will increase in the future due to the assembly of additional trains. BNSF estimates that the tail track could be in use as much as 12 to 14 hours per day. The tail track is generally used to assemble trains during three periods each day: 12 p.m. to 3 p.m., 8 p.m. to 11 p.m., and 3 a.m. to 6 a.m.

For a pedestrian or bicyclist wishing to cross the intersection, the likelihood of blockage by a train would be unpredictable, as would the duration of the blockage. Commuters and bicyclists would likely avoid the risk of being blocked at the tail track for an unknown duration, but would instead probably take other routes such as First Avenue S. crossing over to Alaskan Way S. farther to the north of the tail track. They could also cross E. Marginal Way S. farther to the south at east-west streets that cross the railroad, such as S. Hanford, S. Horton, S. Hines, or S. Spokane Streets.

The future completion by the City of the Mountains to Sound Greenway Trail, as discussed under cumulative effects in Section 6.2, is likely to substantially increase the number of trail users in the project area.

East Marginal Way Bicycle/Pedestrian Facility: This facility is designated as part of the Seattle Urban Trails System in the City's Comprehensive Plan (Seattle 2005). This facility on E. Marginal Way S. consists of a sidewalk on the west side of the street adjacent to Port of Seattle terminals and the U.S. Coast Guard Pier 36 facilities and painted bicycle lanes on the margins of the northbound and southbound lanes. The City considers this facility to be primarily a transportation rather than a recreational facility.

The facility along E. Marginal Way S. connects to other trails to the north and south (see Exhibit 3-2). At S. Spokane Street, it connects to a more extensive trail system in West Seattle via an east-west trail that crosses Harbor Island along S. Spokane Street and continues to the west along West Seattle's Alki Park. The facility will connect to the north with the planned Waterfront Bicycle/Pedestrian Facility extension and farther north to the Elliott Bay Trail, which is described in more detail below.

Recreational activities provided on the facility in this area include exercise-related activities such as walking, bicycling, and skating, as well as passive activities such as enjoyment of scenery and people watching (Betz 1998). The location of the pathway along the waterfront allows those using the pathway primarily as a transportation facility to incidentally enjoy scenery as a component of the trip (Cordell 1995). The adjacent working port facilities may be of interest to some users. The use by those with primarily a recreational interest is most likely as a component of a longer recreational

bicycle trip. Users of the facility have little buffering from noise and other proximity effects of heavy trucks on E. Marginal Way S.

Waterfront Bicycle/Pedestrian Facility: This asphalt pathway is designated as part of the Seattle Urban Trails System in the City's Comprehensive Plan (Seattle 2005). The City considers this facility to be primarily a transportation rather than a recreational facility.

The Waterfront Bicycle/Pedestrian Facility connects to other trails to the north and is planned to extend south (see Exhibit 3-2). The facility connects to the north with the Elliott Bay Trail, which extends through Myrtle Edwards Park, Elliott Bay Park, and around Terminals 89, 90, and 91 to Smith Cove Park and the Elliott Bay Marina in the Magnolia neighborhood. It is planned to connect with the future Mountains to Sound Greenway Trail at S. Atlantic Street. The planned extension would also connect to the south with the East Marginal Way Bicycle/Pedestrian Facility, which in turn connects to a more extensive trail system in West Seattle as described above.

The Existing Bicycle Facilities map of the *Seattle Bicycle Master Plan* (Seattle 2007, Appendix A Figure A-5) shows this path as a "Pedestrian Pathway with Bicycles Permitted." The asphalt pathway allows bicycle use, but it is not specifically designated as a bicycle facility or shown on the city bike map as a bicycle facility since it does not meet minimum American Association of State Highway and Transportation Officials (AASHTO) national design guidelines. Generally, the facility fills with pedestrians during midday, making it unworkable for heavy bike use (Lagerwey 2002 personal communication). The portion of the asphalt pathway south of S. King Street is framed by a bermed landscape area containing street trees on both sides of the pathway. It is lightly used by pedestrians, except during events in the nearby Safeco Field and Qwest Field.

Recreational activities provided on the facility in this area include exercise-related activities such as walking, bicycling, and skating, as well as passive activities such as enjoyment of scenery and people watching (Betz 1998). The location of the pathway along the waterfront allows those using the pathway primarily as a transportation facility to incidentally enjoy the urban and natural scenery (Cordell 1995). The width, grade, and surface of the existing pathway are adequate for persons with mobility impairments, including persons using wheelchairs and pedestrians with limited stamina and limited ability to negotiate grades, such as the elderly (FHWA 1999). The location of the pathway in this portion of the corridor where it is bounded by industrial port activities on much of the west side and by the viaduct on the east is likely to limit the elements of passive sightseeing enjoyment.

Safeco Field hosts the Seattle Mariners baseball team; it is owned by a public development corporation and is leased to the professional sport enterprise. The ballfield fronts on First Avenue S. on the west, extending to the BNSF railyards on the east, from S. Royal Brougham Way on the north and to S. Atlantic Street/Edgar Martinez Drive S. on the south. Associated parking facilities are located south of S. Atlantic Street. The facility is available for rent during non-game days and on game days for select pre-game functions.

Qwest Field and Event Center hosts the Seattle Seahawks football team; it is owned by a public development corporation and is leased to the professional sport enterprise. The stadium is on a site extending from S. King Street to S. Royal Brougham Way and from Occidental Avenue S. to the BNSF railyards on the east. The site includes parking and the event center south of the football stadium. The event center is available for a variety of public and private events. The interior lounges and other spaces can be rented. The facility plays host to community events such as the annual Susan G. Komen Breast Cancer Foundation Race for the Cure.

Klondike Gold Rush National Historic Park, Seattle Unit: This interpretive center and museum is located in a historic building, formerly the Cadillac Hotel, at 319 Second Avenue S. It provides interactive exhibits, films, demonstrations, and interpretive walks highlighting Seattle's role in the gold rush (National Park Service 2007).

Occidental Park: This park occupies a half-block west of Occidental Avenue S. between S. Washington and S. Main Streets. The park contains a number of public art installations, including totem poles and the Seattle Fallen Firefighters Memorial.

Pedestrian volumes on Occidental Avenue S. adjacent to the park totaled 1,812 during the noon hour and 4,212 for daily counts in September 2001 (Seattle 2001). The plaza is largely buffered from views or noise from the existing viaduct by a continuous half block of buildings facing First Avenue S.

Waterfall Garden (Annie E. Casey Waterfall Garden): This private park occupies a half-block street front at S. Main Street and Second Avenue S. The park is owned by the Annie E. Casey Foundation and open to the public during daylight hours. It was endowed by the co-founder of the United Parcel Service corporation, which had its first office in the vicinity. The park has been described as an intimate, oasis-like refuge for seating and a contemplative pocket park (WASLA 2003). It contains stonework and a waterfall designed by Masao Kinoshita and Sasaki Associates.

3.2 Public Art

Safeco Field: As a publicly owned facility, Safeco Field and the adjoining parking garage include a public art program. An Art Review Panel selected nine Northwest artists to create “Art in the Park.” Artists include Ross Palmer Beecher, Tina Hoggatt, Helen Lessick, Ries Niemi, Thom Ross, Stable (artist group of Linda Beaumont, Stuart Keeler, and Michael Machnic), Gerard Tsutakawa, Gu Xiong, and Donald Fels. The artwork is all installed in the field, or in adjacent public open space at entryways.

Qwest Field: The art collection at Qwest Field and Event Center was largely funded by First & Goal Inc., the project’s private partner. After a nationwide request for qualifications, an Art Selection Committee chose 12 artists and projects for commissions. The installations range from the north tower work by Bob Hazardous to sculpture in plaza areas and interior corridors, to murals and photographs. All installations are within the stadium/exhibition hall property.

Occidental Park: This park contains a number of public art installations, including totem poles carved by local artist Duane Pasco, and the Seattle Fallen Firefighters Memorial designed and sculpted by Hai Ying Wu.

Waterfall Garden: This private park contains a waterfall with stonework designed by Masao Kinoshita and Sasaki Associates. Although the work is privately owned, it may be considered public art because it is regularly open to the public.

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Chapter 4 OPERATIONAL EFFECTS, MITIGATION, AND BENEFITS

Operational effects are those that occur over the long term as the facility is in use. The following sections present discussions of different types of operational effects for the Project.

4.1 Operational Effects

4.1.1 Parks, Recreation, and Public Access Facilities

Jack Perry Memorial Viewpoint: This shoreline access facility would continue to have driveway access from E. Marginal Way S. The change in the configuration of E. Marginal Way S. and SR 99 is in the opposite direction and at a distance from the viewpoint and therefore is not likely to change the enjoyment of views of the Duwamish East Waterway and Port facilities from the site. Noise is likely to be somewhat less than from the existing viaduct, because the elevated structure would be lower and roadway noise is more likely to be blocked or attenuated by obstructions such as buildings between the roadway and the viewpoint.

Mountains to Sound Greenway Trail: The trail uses the sidewalk on the north side of S. Atlantic Street between Fourth Avenue S. and Alaskan Way and an asphalt path under the existing viaduct. This trail is planned to connect with the relocated Waterfront Bicycle/Pedestrian Facility west of the SR 99 elevated structure.

The trail corridor is currently continuous between First Avenue S. and Alaskan Way S., except when the trail is periodically blocked with rail cars on the railroad's tail track. The Project would maintain a continuous corridor on the north side of S. Atlantic Street, but would add four new roadway crossings. The crossing for the northbound surface street lanes located east of Utah Avenue S. would consist of three lanes. The extension of Utah Avenue S. for the U-shaped undercrossing of the tail track consists of two lanes. Two crossings would be provided for the northbound surface street, one two-lane roadway for eastbound left turns and one for westbound right turns. All of these are likely to be signalized with a pedestrian crossing cycle. The time required to travel from First Avenue S. to the west side of the elevated structure would depend on signal cycles and coordination. The complex vehicular movements accommodated by the intersections are likely to result in a high rate of interruption of the trip for bicyclists and pedestrians on the Mountains to Sound Greenway Trail to wait for traffic.

Bicyclists with a high tolerance for sharing the road with heavy truck traffic may use the roadway within the U-shaped undercrossing. Both pedestrians and bicycles may use the proposed 8-foot-wide sidewalk within the undercrossing. Users are likely to experience high noise levels within the undercrossing from adjacent truck traffic. The blockage of the trail from increased use of the tail track may encourage users to seek other corridors. This is likely to be the case primarily for commuters and others that use the trail frequently for through trips and are likely to be less tolerant of delay. An alternate route would include traveling north on First Avenue S. to connect to the waterfront farther beyond the end of the tail track.

Waterfront Bicycle/Pedestrian Facility: The existing asphalt pathway on the east side of the existing Alaskan Way S. between S. Royal Brougham Way and S. King Street would be relocated from its current route. Bicycles would be accommodated adjacent to vehicle lanes on Alaskan Way S. adjacent to the SR 99 elevated and at-grade facilities from north of S. Atlantic Street to S. King Street. An additional separate asphalt pathway would be provided on the west side of Alaskan Way S. west of the tail track and would be shared by bicycles and pedestrians. The existing configuration of the Waterfront Bicycle/Pedestrian Facility between S. King Street and S. Royal Brougham Way would be replaced by a trail on both sides of the new roadway. The shared use path corridor varies in width from 22 to 31 feet and provides opportunities for adjacent buffering landscaping. Current conceptual plans indicate that the trail on the west side would be buffered from Terminal 46 to the west by a landscape area with trees. The trail on the east side would be buffered from the roadway and remote ferry holding area by a landscape area with trees on both sides.

Sports Complexes: Access to both Safeco Field and Qwest Field would be enhanced by the new ramps, allowing a southbound on-ramp and a northbound off-ramp south of S. King Street and north of S. Royal Brougham Way. This ramp configuration would provide additional access for sports events as compared with today's access to SR 99, which is limited to the southbound off-ramp and northbound on-ramp provided at First Avenue S. The primary benefit would be provided to northbound traffic on SR 99, which currently cannot exit south of Seneca Street.

Klondike Gold Rush National Historic Park, Occidental Park, and Waterfall Garden: These parks are not likely to be directly affected because of their distance from the Project.

4.1.2 Public Art

No public art installations would be displaced. The change in configuration of SR 99 is not likely to be visible in the viewing area for any of the works of art and would not affect the visual context that is part of the experience of the viewing public.

4.2 Mitigation for Operational Effects

No permanent effects would occur to existing facilities; therefore, no mitigation would be required.

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Chapter 5 CONSTRUCTION EFFECTS AND MITIGATION

The discussion of construction effects is based on preliminary design plans for construction staging and construction duration.

5.1 Construction Effects

The initial preparatory site work would substantially disrupt the existing streets and the patterns of movement north and south along the affected corridor and to some extent east to west.

Access to waterfront terminals and E. Marginal Way S. would be maintained. These access lanes would be shifted as construction proceeds.

The character of construction effects would be similar along most of the corridor, although the degree of effect would vary according to the location and type of park, open space, and public access facilities.

- Construction would disrupt existing and accustomed patterns of movement. Even with provisions for access across construction sites, the perceived inconvenience would lead many people to avoid the area in favor of other elective park and recreation activities not subject to uncertainty and disruption.
- The most substantial effects are likely for cars and buses accessing the area from the Alaskan Way Viaduct to the north. Changes in circulation patterns could result in uncertainty for motorists. Many may respond by avoiding the area, or by using alternate routes such as local streets or the SR 519 access to I-90 and Interstate 5 (I-5).
- The Waterfront Bicycle/Pedestrian Facility would be moved during construction. However, the function of the Waterfront Bicycle/Pedestrian Facility would be maintained throughout the construction period using temporary detours through adjacent rights-of-way.
- Proximity effects from construction (such as noise, vibration, and dust) would make locations close to construction less desirable for passive recreation activities such as walking, picnicking, and viewing the view amenities of the area.
- The visual character of the construction site may be viewed by many as unappealing and lead them to seek other locations for park and recreation activities. Some people, however, may enjoy visiting the construction site and visit periodically to observe the progress, and use park and recreation facilities in the area as part of the visit.

Effects on specific facilities within the project area are outlined in additional detail below.

Jack Perry Memorial Viewpoint: This shoreline access facility would continue to be accessed from E. Marginal Way S. Access to E. Marginal Way S. from the east would be limited by construction, which would likely restrict the number of available lanes. Construction noise is likely to be far enough away (more than two blocks) to have little effect on the enjoyment of views of Elliott Bay and the Duwamish East Waterway from the site.

Waterfront Bicycle/Pedestrian Facility: The existing multi-purpose asphalt pathway in the project area would be removed for construction of the interchange between S. Atlantic Street and S. King Street. During initial stages of construction, bicycles would be accommodated on E. Marginal Way S. south of the construction area in much the same configuration as today. North of S. Atlantic Street, bicyclists would likely shift to First Avenue S. and either cross to E. Marginal Way S. or continue south on First Avenue S. to S. Hanford Street or other east-west connections to E. Marginal Way S. Temporary pedestrian facilities might be provided to the west on Terminal 46, but it is more likely that all pedestrians would be rerouted to First Avenue S., where sidewalks on at least one side of the street are likely to be open during construction.

Bicyclists and pedestrians using alternative routes during construction would be routed to city streets that lack the landscape buffers of the existing facility. The lack of visual amenities may lead to lower levels of use for recreational walking and bicycling than on the existing trail. The extent to which the route continues to be used by persons with exercise or visual interest as their primary objective is likely to be based on the corridor experience as a whole, rather than a small portion. Persons interested in using the longer corridor extending from Magnolia to West Seattle would continue to be attracted by the amenity value of other parts of the corridor that retain interest and accessibility.

Mountains to Sound Greenway Trail. This proposed trail connection would be rerouted from S. Atlantic Street to an alternative route, most likely along First Avenue S., where it would connect to E. Marginal Way S. either north or south of the Project. For the duration of construction, the connection to the waterfront to the north would likely be made along First Avenue S. to S. King Street. Persons using the trail are likely to continue to perceive the waterfront to be of interest, despite construction disruption in the project area.

Sports Complexes: Access to both Safeco Field and Qwest Field would be reduced by limiting the number of lanes on the existing viaduct during construction. The ramps at First Avenue S. for traffic to and from the north

would be maintained, and therefore it is likely that current patterns and levels of use would continue. Traffic from the south currently cannot access the area except at Seneca Street, which is likely a relatively low volume of users. Persons accessing the area from the north would continue to use the First Avenue S. exit.

Congestion may lead some fans to use different routes or different modes of transportation. The overall effect to attendance at the sport fields is likely to be minor because the existing viaduct on- and off-ramps at First Avenue S. provide access only to and from the north. Access from the east, especially with completion of the SR 519 connection to I-5 and I-90, would be a viable route for most attendees. In addition, people are likely to develop alternative routes and modes of access because they would have sufficient time to plan and because no substitute activities are readily available to fans of major league sports.

Klondike Gold Rush National Historic Park, Occidental Park, and Waterfall Garden: These parks within the Pioneer Square Historic District would not be directly affected by construction, but traffic diverted to local streets during construction may add to proximity effects such as noise and the perception of being hemmed in by increased traffic.

5.2 Construction Mitigation

Many of the mitigation measures described below are conceptual and apply to uses other than recreation and public access facilities. To mitigate for proximity effects of noise during construction, the specific effects on specific uses must be evaluated further in cooperation with the particular facility operator. Options may include the following measures:

- The perception that the construction area is difficult to access and inconvenient could be addressed by a public information program regarding provisions for access. The information could address access to park and recreation facilities as well as businesses. Letting the public know that they will still be able to access these resources will reduce the extent to which people avoid the area. Specific measures are listed in greater detail below.
- Provide and publicize alternative modes of access to the sports facilities by specific designated freeway and local streets, by public transit, or by dedicated transit service on peak demand days from park-and-ride or other facilities.
- Provide clear pedestrian, bicycle, and vehicular routes around or across construction sites. These would need to be designed to be safe,

pleasant, and to integrate with opportunities to view the construction site as an additional area of interest. These physical facilities would be combined with public information, including sidewalk wayfinding information that would clearly indicate present and future opportunities for access.

- Provide a continuous pedestrian corridor east of the construction area along First Avenue S. for continuous north–south movement when the Waterfront Bicycle/Pedestrian Facility is displaced with possible improvements on east–west corridors to the north and south to allow diverted trips to return to E. Marginal Way S. or Alaskan Way S.
- The likely public perception that facilities like the trails or the shoreline access at Jack Perry Memorial Viewpoint are not as convenient or pleasant an environment to visit during construction can be addressed through a coordinated strategy to include public information.
- The effects of noise and vibration on passive recreation activities such as walking, picnicking, and viewing the aesthetic amenities of the area may be addressed by a variety of scheduling and noise attenuation measures, including:
 - Designating specific sensitive receptors for which specific noise levels may be identified with scheduling of specific activities scheduled for time of lowest public use.
 - Constructing temporary noise barriers or curtains around stationary equipment and long-term work areas close to such locations.
 - Using the quietest equipment available.
 - Undertaking especially noisy operations such as crushing and recycling of concrete off-site, away from noise-sensitive activities.
- The visual interest of the construction site may be enhanced by viewpoints and information that may attract people to the construction site who also may use park and recreation facilities in the area as part of the visit.

Chapter 6 INDIRECT AND CUMULATIVE EFFECTS

Indirect effects are effects that are caused by the Project but occur later in time or are farther removed in distance. Cumulative effects are effects that could result when relatively minor independent effects from multiple projects become substantial collectively over time if not mitigated. Indirect and cumulative effects must be identified and examined in an effort to avoid or minimize their possible effects and incorporate mitigation and project planning where needed.

6.1 Indirect Effects

There would be no adverse indirect effects to parks or recreational facilities. There would, however, be some benefit to the pedestrian and bicycle facilities through the construction of facilities on both sides of SR 99.

6.2 Cumulative Effects

Cumulative effects are the total effects of the proposed action, combined with past actions as well as reasonably foreseeable future actions. They can include both construction and operational effects. These effects could result from other projects that would add park or recreation facilities or change patterns of use of existing or planned facilities. If construction schedules overlap, there could be temporary cumulative effects on parks and recreation in the project area, such as noise and lower levels of use related to changes in traffic circulation, parking, or access.

City of Seattle's Bridging the Gap – Downtown Paving Plan: 2006–2013

The goals of the Seattle Department of Transportation (SDOT) Bridging the Gap plan that are relevant to the Project include:

- Improving pedestrian and bicycle safety and creating safe routes to schools.
- Increasing transit speed and reliability.

Over a period of several years, SDOT will:

- Resurface, restore, or replace approximately 300 lane-miles of arterial streets.
- Support the development of a Pedestrian Master Plan.
- Provide bike lanes in accordance with the Bicycle Master Plan.
- Add 4 miles of new multi-use (shared) paths.

- Secure up to 45,000 hours of new Metro Transit service.
- Enhance transit and safety improvements on three key transit corridors.
- Fund four major capital improvement projects: Spokane Street Viaduct, Lander Street Overpass, Mercer Street Corridor, and King Street Station.

The provision of bike lanes to the standards of Seattle's Bicycle Master Plan represents a beneficial cumulative effect, when considered with the construction of additional bicycle facilities as part of the Project. Additionally, improved pedestrian mobility and access will benefit the project area. However, if Seattle's construction of Building the Gap pavement projects, including bicycle lanes, overlaps with the Project's construction, there would be adverse effects on pedestrian and bicycle access and mobility in and near the project area.

Mountains to Sound Greenway Trail: This proposed trail connection from I-90 to the waterfront is included in \$2.08 million funding in the City of Seattle Pro Parks Levy (Seattle 2000b). The trail is designated by the City as part of the Mountains to Sound Greenway, a scenic, historic, and recreation corridor along I-90 from near Ellensburg to Seattle (Mountains to Sound Greenway 2007). The future completion by the City of the portion of the Mountains to Sound Greenway to the east of the project is likely to substantially increase the number of recreational users of the existing and proposed bicycle/pedestrian facilities.

SR 519 Intermodal Access Project Phase 2: This project includes a grade-separated crossing at S. Royal Brougham Way to eliminate pedestrian, traffic, train and freight conflicts at S. Royal Brougham Way and Third Avenue S. The project includes a new grade-separated pedestrian walkway at S. Royal Brougham Way to make access to Qwest and Safeco Fields and Sound Transit's Stadium Station safer and more efficient (WSDOT 2007a). The grade-separated walkway is likely to provide additional flexibility in routing for recreational users of local trail systems and other routes.

WSDOT anticipates that the First Avenue S. and S. Atlantic Street intersection improvements will begin in fall 2008 and should be substantially completed by spring 2009. It is WSDOT's objective to have the S. Royal Brougham Way connector structure and Ramp A, the westbound I-90 to S. Atlantic Street structure and associated approach ramps, and the structural tie-ins and surface street improvements open to traffic by December 31, 2010. All SR 519 Phase 2 work should be completed by mid-year 2011. Because construction of the S. Holgate Street to S. King Street Viaduct Replacement Project would not

begin until June 2009, there would be minimal overlap between the two projects as currently scheduled.

Private Development: Private development may provide or contribute to recreational opportunities in a number of ways.

Private facilities such as health clubs and offices may encourage people to engage in recreational activities or nonmotorized commuting methods such as jogging or bicycling by providing lockers, showers, bike racks, and other facilities such as exercise equipment. Private facilities can incorporate elements that increase the attractiveness of the area and draw more people to the area. This may lead to increased use of recreational facilities, or an increased recreational component of existing facilities such as trails. Some privately owned buildings and undeveloped parcels along First Avenue S. are currently being developed, or may be redeveloped in the future, to residential or office uses that increase the number of persons in the area. Some examples include the WOSCA site between S. Royal Brougham Way and S. Dearborn Street, Stadium Lofts at Railroad Way S. and Occidental Avenue S., and the planned Home Plate mixed-use project at the southwest corner of First Avenue S. and S. Atlantic Street. Other sites that may be redeveloped include vacant parcels used as parking lots that currently produce relatively limited returns.

They also may incorporate restaurant and other retail and commercial uses fronting on public streets, which would increase the perception of the overall desirability of the area. The largely industrial character of the area to the east of the project area is less likely to result in new recreation facilities or new demand. The publicly owned sports facilities to the east will continue to attract individuals to the area.

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